CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

COMPLAINT NO. R2-2003-0002

ADMINISTRATIVE CIVIL LIABILITY
IN THE MATTER OF
THE CITY AND COUNTY OF SAN FRANCISCO, SAN FRANCISCO INTERNATIONAL AIRPORT - WATER QUALITY CONTROL PLANT
SAN MATEO COUNTY

This Complaint to assess administrative civil liability (ACL) pursuant to California Water Code (CWC) Sections 13385(c) and 13323 is issued to the City and County of San Francisco, San Francisco International Airport (hereafter the Discharger) based on a finding of its violations of Waste Discharge Requirements Order No. 95-054, which served as the NPDES permit for the Discharger's Water Quality Control Plant. The period covered by this Complaint is April 1, 1995 through December 31, 1999.

The Executive Officer finds that:

1. The Discharger owns and operates the Water Quality Control Plant (hereinafter the Treatment Plant), which provides secondary treatment for domestic wastewater collected from airplanes and various facilities at the airport. The Treatment Plant has a dry weather treatment capacity of 2.2 million gallons per day.

2. Wastewater treatment processes at the Treatment Plant consist of coarse objects removal by bar screens, grits removal, settling of particles in a primary clarifier, degradation of organic matters in aerations tanks, solid settling in a secondary clarifier, and disinfection. Treated effluent is pumped to a remote dechlorination facility owned by North Bayside System Unit (NBSU), a joint-powers authority responsible for the operation of certain shared transport, treatment and disposal facilities for the Cities of Millbrae, Burlingame, and South San Francisco, Marine Magnesium Company, and the Discharger. From the NBSU dechlorination facility, the combined effluent is dechlorinated and discharged via a deepwater outfall into the lower San Francisco Bay.

3. During the period covered by this Complaint, the Discharger violated effluent limitations of its NPDES permit sixty-eight times, causing unauthorized discharges of partially treated wastewater to the lower San Francisco Bay. These unauthorized discharges, which caused potential threats to water quality and public health, were mostly due to unreliable treatment performance as a result of inadequate backup capacities for the primary and secondary clarifiers. Provision 7 of Order No. 95-054 established five tasks with specific compliance dates for the Discharger to provide backup clarifiers. The Discharger essentially completed the first three tasks but failed to comply with the remaining two tasks.

4. During the same period, the Discharger bypassed secondary treatment three times and initiated near-shore discharges two times. The near-shore discharges received no initial dilution. Both types of bypass and near-shore discharges, which caused potential threats to water quality and public health, violated the discharge prohibitions of the NPDES permit.

5. On November 9, 2001, the Regional Board staff issued a Notice of Violation to the Discharger regarding violations of effluent limitations and discharge prohibitions, and non-compliance with Provision 7 requirements of Order 95-054.

6. On November 28, 2001, the Regional Board adopted Cease and Desist Order No. 01-146 (hereinafter the CDO) requiring the Discharger to cease and desist discharging partially treated wastewater in violation of Order No. 95-054. The CDO superseded Provision 7 requirements of Order No. 95-054, and established a compliance schedule for the Discharger to complete corrective actions to bring the Treatment Plant into compliance with the waste discharge requirements of its permit, which was reissued and replaced by Order No. 01-145.

7. On February 22, 2002, pursuant to the CDO, the Discharger proposed plant improvement measures including the installation of a new headwork, inflow and effluent flow equalization, sludge handling and effluent disinfection facilities. The Discharger also proposed to replace the existing aeration system with three sequential batch reactors, which would provide both biodegradation and clarification for the wastewater in the same reactor tank. As such, there would be no need for separate clarifiers. Since the Board's adoption of the CDO on November 28, 2001, the Discharger has been in compliance with the requirements of the CDO.

ALLEGATIONS

8. Discharger has violated 74 times the following waste discharge requirements contained in Order No. 95-054:

Discharge Prohibition A.1
Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

Discharge Prohibition A.2
Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant or from any of the collection or transport system or pump stations tributary to the treatment plant or outfall is prohibited.

Effluent Limitations
Effluent discharged into the combined forcemain-outfall shall not exceed the following limits:

Constituent	*Units*	*Monthly Average*	*Weekly Average*	*Daily Maximum*	*Instantaneous Maximum*
Carbonaceous Biochemical Oxygen Demand, 5-day ($CBOD_5$, 20°C)	mg/l	25	40	50	---
Total Suspended Solids (TSS)	mg/l	30	45	60	---
Settleable Matter (SM)	ml/l-hr	0.1	---	---	0.2

- Total Coliform Bacteria: The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five (5) consecutive effluent samples shall not exceed 240 coliform organisms per 100 milliliters (240 MPN/100 ml). Any single sample shall not exceed 2,400 MPN/100 ml.

.....

- Toxic Pollutant Effluent Limitations: Representative samples of the effluent shall not exceed, [among others], the following limit:

	Daily Average
Cyanide	10 µg/l

Self-Monitoring Program Part A: Self-Monitoring Reports
Written reports shall be filed regularly for each calendar month... [and] comprised of... tabulations of the results from each required analysis specified in Part B. Part B specifies that the effluent shall be sampled for CBOD three times a week.

9. Specifically, the Discharger also violated the following discharge prohibitions contained in Order No. 95-054 between April 1, 1995 and December 31, 1999:

   a. Discharge Prohibition A.1
   Near-shore effluent discharges with no initial dilution two times.

   b. Discharge Prohibition A.2
   Bypass secondary treatment three times.

   These violations occurred on four days and the total estimated volume of these unauthorized discharges was 1.67 million gallons.

10. Additionally, according to monitoring reports received, the Discharger reported sixty-eight violations of the following effluent limits during the period covered by this Complaint:

    a. Daily maximum CBOD concentration limit eleven times;
    b. Monthly average CBOD concentration limit ten times;
    c. Weekly average CBOD concentration limit six times;
    d. Daily maximum TSS concentration limit four times;
    e. Monthly average TSS concentration limit one time;
    f. Weekly average TSS concentration limit one time;
    g. Instantaneous maximum SM concentration twelve times;
    h. Monthly average SM concentration four times;
    i. Five-sample median total coliform limit ten times; and
    j. Daily average cyanide concentration nine times.

    Details of these violations are summarized in the attached Staff Analysis and Recommendations, which is incorporated herein by this reference. These effluent limit exceedances resulted in a total of 442 days of permit violations and a discharge of over 368.7 million gallons of partially treated wastewater to the lower San Francisco Bay.

11. The Discharger also failed to include a CBOD monitoring result for 1 day in September 1997. This constitutes a failure to submit a complete self-monitoring report and is in violation of the Self-Monitoring Program of Order No. 95-054.

PROPOSED CIVIL LIABILITY

1. Section 13385 of the CWC authorizes the Regional Board to assess ACL for violations of waste discharge requirements.

2. The Regional Board could impose the maximum civil liability in this matter as follows:

   a. $10,000 for each day in which a violation of the permit occurred; and
   b. $10 per gallon for the discharge volume that is not susceptible to cleanup and exceeds 1,000 gallons.

   If the matter is referred to the Attorney General for judicial enforcement, a higher liability of $25,000 per day of violation and $25 per gallon may be imposed.

3. Issuance of this Complaint is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with Section 15321(a)(2), Title 14, California Code of Regulations.

4. In determining the ACL amount, the following factors, which are defined in Section 13385(e) of the CWC, have been taken into consideration and are discussed in the attached Staff Analysis and Recommendations:

   > "The nature, circumstances, extent, and gravity of the violation or violations, whether the discharge is susceptible to cleanup or abatement, the degree of toxicity of the discharge, and, with respect to the violator, the ability to pay, the effect on its ability to continue its business, any voluntary cleanup efforts undertaken, any prior history of violations, the degree of culpability, economic benefit or savings, if any, resulting from the violation, and such other matters that justice may require."

5. The Executive Officer of the Regional Board proposes that an ACL be imposed by the Regional Board under Sections 13323 and 13385 of the CWC in the amount of $227,225.00.

THE CITY AND COUNTY OF SAN FRANCISCO, SAN FRANCISCO INTERNATIONAL AIRPORT IS HEREBY GIVEN NOTICE THAT:

1. The Executive Officer of the Regional Board proposes that the Discharger be assessed ACL in the amount of $227,225.00, which includes $22,000.00 in staff cost.

2. The Regional Board will hold a hearing on this Complaint on May 21, 2003, unless the Discharger waives the right to a hearing by signing the last page of this Complaint and checks the appropriate box. By doing so, the Discharger agrees to:

   a) Pay the full penalty of $227,225.00 within 30 days after the signed waiver becomes effective, or
   b) Pay a penalty in an amount of $44,000.00 within 30 days after the signed waiver becomes effective. Satisfactorily complete a supplemental environmental project (SEP) up to an amount equivalent to $183,225.00. The sum of the SEP amount and the penalty to be paid to the State Water Pollution and Cleanup Abatement Account shall equal the full penalty of $227,225.00.

3. If the Discharger chooses to propose a SEP, it must submit a proposal by April 30, 2003 to the Executive Officer for approval. Any SEP proposal shall also conform to the requirements specified in Section IX of the Water Quality Enforcement Policy, which was adopted by the State Water Resources Control Board on February 19, 2002. If the proposed SEP is not acceptable to the Executive Officer, the Discharger has 30 days from receipt of notice of an unacceptable SEP to either submit a new or revised proposal, or make a payment for the suspended amount of the SEP. All payments, including any money not used for the SEP, must be payable to the State Water Pollution Cleanup and Abatement Account. Regular reports on the SEP implementation shall be provided to the Executive Officer according to a schedule to be determined. The completion report for the SEP shall be submitted to the Executive Officer within 60 days of project completion.

4. The signed waiver will become effective on the next day after the public comment period for this Complaint is closed, provided that there are no significant public comments on this Complaint during the public comment period. If there are significant public comments, the Executive Officer may withdraw the Complaint and reissue it as appropriate.

5. If a hearing is held, the Regional Board will consider whether to affirm, reject, or modify the proposed ACL, or whether to refer the matter to the Attorney General for recovery of the civil liability.

Loretta K. Barsamian

Loretta K. Barsamian
Executive Officer

March 18, 2003

Date

WAIVER

(The signed waiver will become effective on the next day after the public comment period for this Complaint is closed, provided that there are no significant public comments on this Complaint during the public comment period. If there are significant public comments, the Executive Officer may withdraw the Complaint and reissue it as appropriate.)

☐ Waiver of the right to a hearing and agree to make payment in full.
By checking the box, I agree to waive my right to a hearing before the Regional Board with regard to the violations alleged in Complaint No. R2-2003-0002 and to remit the full penalty payment to the State Water Pollution Cleanup and Abatement Account, c/o State Water Resources Control Board at 1515 Clay Street, Oakland, CA 94612, within 30 days after the signed waiver becomes effective as indicated above. I understand that I am giving up my right to be heard, and to argue against the allegations made by the Executive Officer in the Complaint, and against the imposition of, or the amount of, the civil liability proposed.

☐ Waiver of the right to a hearing and agree to make payment and undertake a SEP.
By checking the box, I agree to waive my right to a hearing before the Regional Board with regard to the violations alleged in Complaint No. R2-2003-0002, and to complete a supplemental environmental project (SEP) in lieu of the suspended liability up to $183,225.00. I also agree to remit payment of the balance of the fine to the State Water Pollution Cleanup and Abatement Account within 30 days after the signed waiver becomes effective. I understand that the SEP proposal shall conform to the requirements specified in Section IX of the Water Quality Enforcement Policy, which was adopted by the State Water Resources Control Board on February 19, 2002, and be subject to approval by the Executive Officer. If the SEP proposal, or its revised version, is not acceptable to the Executive Officer, I agree to pay the suspended penalty amount for the SEP within 30 days of a letter from the Executive Officer denying the approval of the proposed SEP. I also understand that I am giving up my right to argue against the allegations made by the Executive Officer in the Complaint, and against the imposition of, or the amount of, the civil liability proposed. I further agree to satisfactorily complete the approved SEP within a time schedule set by the Executive Officer.

Name (print)	Signature
Date	Title/Organization

SFIA-WQCP
ACL R2-2003-0002
SAR

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF ANALYSIS AND RECOMMENDATIONS

TO: Loretta K. Barsamian
Executive Officer

FROM: Eddy So
WRCE

DATE: March 4, 2003

SIGNATURE: _____

SUBJECT: Consideration of Administrative Civil Liability for NPDES Permit Violations - Complaint No. R2-2003-0002
The City and County of San Francisco, San Francisco International Airport - Water Quality Control Plant, San Mateo County

CONCUR: _____
Greg Walker
Section Leader

_____
Shin-Roei Lee
Division Chief

_____
Wil Bruhns
Enforcement Coordinator

Reviewed for Legal Sufficiency: _____
Yuri Won
Legal Counsel

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I. SUMMARY

The administrative civil liability (ACL) Complaint No. R2-2003-0002 imposes a total fine of $227,225.00 on the City and County of San Francisco, San Francisco International Airport (hereinafter the Discharger) for its violations of effluent limitations, discharge prohibitions, and self-monitoring program contained in Waste Discharge Requirements Order No. 95-054 during the period between April 1, 1995 and December 31, 1999. Order No 95-054 served as the NPDES permit regulating the discharge

of effluent from the Water Quality Control Plant (hereinafter the Treatment Plant), which the Discharger owns and operates. During the period covered by the Complaint, the Discharger violated effluent limits, discharge prohibitions, and self-monitoring program 443 days, resulting in unauthorized discharges of over 370 million gallons of partially treated wastewater to the lower San Francisco Bay, a water of the State.

Effluent limit violations covered by the Complaint included those for carbonaceous biochemical oxygen demand (CBOD), total suspended solids (TSS), settleable matter (SM), total coliform bacteria, and cyanide. Violations of discharge prohibitions included bypasses of secondary treatment and near-shore discharges with no initial dilution. Most of these violations were caused by the Discharger's failure to provide sufficient backup clarifier capacities at the Treatment Plant.

The penalty assessment in the Complaint followed the procedures and requirements in the Water Quality Enforcement Policy (hereinafter the Enforcement Policy), which was adopted by the State Water Resources Control Board on February 19, 2002 and approved by the Office of Administrative Law on July 30, 2002. The recommended ACL fine has considered all the factors specified in Sections 13385(e) of the California Water Code (CWC).

II. BACKGROUND

On March 15, 1995, the Regional Board adopted Waste Discharge Requirements Order No. 95-054, which served as the NPDES permit (No. CA0038318) to regulate the discharge of treated wastewater from the Treatment Plant.

During the period covered by the Complaint, the Discharger owned and operated the Treatment Plant, which provided secondary treatment and disinfection for the domestic wastewater collected from airplanes and various facilities at the airport. The Treatment Plant had a dry-weather treatment capacity of 2.2 million gallons per day. Disinfected effluent from the Treatment Plant was discharged into a remote dechlorination facility owned and operated by North Bayside System Unit (NBSU), a joint-powers authority responsible for the operation of certain shared transport, treatment and disposal facilities for the Cities of Millbrae, Burlingame, and South San Francisco, Marine Magnesium Company, and the Discharger. From the NBSU dechlorination facility, the combined effluent was dechlorinated and discharged via a deepwater outfall into the lower San Francisco Bay.

Wastewater treatment consisted of coarse objects removal by automatic bar screens; grit removal; solids settling in a primary clarifier; organic matters degradation in activated sludge aeration basins; sludge settling in a secondary clarifier; disinfection with sodium hypochlorite; and effluent pumping to the NBSU dechlorination facility.

The Treatment Plant had no backup capacity for both the primary and secondary clarifiers. When either clarifier needed to be taken out of service for maintenance or repair, or when the influent flow to the Treatment Plant exceeded the design capacity of either clarifier, the Discharger had difficulty in providing adequate treatment for the wastewater. As a result, the Discharger had to bypass secondary treatment and discharge partially treated wastewater to the lower San Francisco Bay. Since the Treatment Plant had been unreliable to treat wastewater when either clarifier was out of service, Order No. 95-054 included a provision that required the Discharger to complete the design and construction of one primary clarifier and one secondary clarifier so that these units could become fully operational by January 1, 1998.

Presently, the Discharger still owns and operates the Treatment Plant as described above without backup capacities for the clarifiers. However, pursuant to Cease and Desist Order No. 01-146 (CDO) adopted by the Regional Board on November 28, 2001, the Discharger has recently completed the design work of a major plant upgrade. Construction of the plant upgrade, which costs approximately $40 million, is currently underway. When completed, the Treatment Plant will provide the necessary redundancy and improve its capability to handle varying influent flows and pollutant loads in the future.

III. NPDES PERMIT PROHIBITIONS AND EFFLUENT LIMITATIONS VIOLATED

Order No. 95-054 established prohibitions, effluent limitations, provisions, and self-monitoring program to regulate the discharges of effluent from the Treatment Plant. The Discharger violated the following applicable permit requirements:

Discharge Prohibition A.1
Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

Discharge Prohibition A.2
Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant or from any of the collection or transport system or pump stations tributary to the treatment plant or outfall is prohibited.

.....

Effluent Limitations B.1
Effluent discharged into the combined forcemain-outfall shall not exceed the following limits:

Constituent	*Units*	*Monthly Average*	*Weekly Average*	*Daily Maximum*	*Instantaneous Maximum*
Carbonaceous Biochemical Oxygen Demand, 5-day, 20°C (CBOD)	mg/l	25	40	50	---
Total Suspended Solids (TSS)	mg/l	30	45	60	---
Settleable Matter (SM)	ml/L-hr	0.1	---	---	0.2

.....

Effluent Limitation B.3
The arithmetic mean of the CBOD and TSS, by weight, for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85% removal).

.....

Effluent Limitation B.5
The moving median value for the most probable number (MPN) of total coliform bacteria in any five consecutive effluent samples shall not exceed 240 coliform organisms per 100 milliliters (MPN/100 mL). Any single sample shall not exceed 2,400 MPN/100 mL.

Effluent Limitation B.6
Effluent shall not exceed cyanide daily average concentration: 10 µg/L
.....

Self-Monitoring Program Part A: Self-Monitoring Reports
Written reports shall be filed regularly for each calendar month... [and] comprised of... tabulations of the results from each required analysis specified in Part B. Part B specifies that the effluent shall be sampled for CBOD three times a week.

IV. ENFORCEMENT CONSIDERATIONS

Section 13385(e) of the CWC requires the Regional Board to consider various factors when issuing an ACL. These include the nature, circumstances, extent and gravity of the violations, whether the discharge is susceptible to cleanup or abatement, the degree of toxicity of the discharge, and, with respect to the violator, the ability to pay, the effect on its ability to continue its business, any voluntary cleanup effort undertaken, degree of culpability, prior history of violations, economic benefit or savings, and other factors justice may require. These factors, which are also described in the Enforcement Policy, are further discussed in following sections.

A. Nature of Violations
During the period covered by the Complaint, the Discharger violated the above discharge prohibitions, effluent limitations, and self-monitoring program for a total of 443 days, resulting in the discharge of over 370 million gallons of partially treated wastewater into the lower San Francisco Bay.

From April 1 through December 31, 1995, the Treatment Plant exceeded effluent limitations of CBOD (1 violation) and cyanide (3 violations).

In 1996, the Treatment Plant reported 20 effluent limit violations including CBOD (12 violations), cyanide (4 violations), and total coliform (4 violations). These violations were reportedly due to high inflows caused by heavy rains, plant operational problems, and operator errors.

In 1997, the Treatment Plant reported 11 effluent limit violations including CBOD (3 violations), SM (4 violations), and total coliform (4 violations), and failed to include a CBOD monitoring result for 1 day in September 1997, as required by the self-monitoring program of the permit. The effluent limit violations were reportedly due to high hydraulic loadings to the Treatment Plant that caused washout of settleable matter from the secondary clarifier and inadequate disinfection. The cause of failure to comply with the self-monitoring program is unknown.

In 1998, the Treatment Plant reported 16 effluent limit violations including SM (9 violations), TSS (4 violations), total coliform (2 violations) and cyanide (1 violation). The Treatment Plant also reported 4 violations of discharge prohibitions including two bypasses of secondary treatment and two near-shore discharges of effluent with no initial dilution. These violations were reportedly due to heavy rains that caused hydraulic overloading to the plant, resulting in excessive washout of solids (both settleable matters and total suspended solids) from the secondary clarifier and inadequate disinfection.

In 1999, the Treatment Plant reported 17 effluent limit violations including CBOD (11 violations), SM (3 violations), TSS (2 violations), and cyanide (1 violation). The Treatment Plant also reported one bypass of secondary treatment. These violations were reportedly due to the failure of the sludge collection

mechanism of the primary clarifier, the out of service of the secondary clarifier, heavy rains causing high inflows to the Treatment Plant, and infiltration of seawater into the sewer.

Attachment A of this report summarizes the nature of these permit violations.

B. Circumstances, Extent, and Gravity of Violations

Attachment A also includes information regarding the extent and gravity of these violations. The gravity of violations associated with the bypasses is significant, as the corresponding discharges received partial treatment that was inadequate to protect the receiving water's beneficial uses. Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permit (hereinafter the Standard Provisions), which is part of the NPDES permit for the Treatment Plant, specifies that "bypass is prohibited, [and] the Board may take enforcement action against the discharger for plant bypass unless... (b) There were no feasible alternatives to the bypass...This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass ...". The abovementioned violations of the bypass prohibition contained in the permit did not satisfy the bypass exception condition in the Standard Provisions, and therefore subject to enforcement. The two bypasses resulted in a total estimated volume of 1.38 million gallons[1] of unauthorized discharge to the lower San Francisco Bay.

The gravity of violations associated with the near-shore discharges is also significant because of the lack of initial dilution. These undiluted discharges resulted in elevated pollutant levels in the receiving water at the point of discharge. The total volume of the near-shore discharges was 288,000 gallons.

The total volume of the above-unauthorized discharges was estimated to be 1.67 million gallons.

The majority of these effluent limit violations were caused by exceedances of the technology-based limits including CBOD, TSS, SM, and total coliform (see Table 1 below). Although the total volume of discharges associated with these effluent limit violations is over 368 million gallons, the gravity of these violations is low, as most of these effluent limit violations are related to conventional pollutants and the discharge is subject to significant dilution in the NBSU force main as well as in the San Francisco Bay.

The Discharger indicated that the 18 effluent limit violations in January and February 1998 were related to the El Nino storm events, which were beyond the Treatment Plant's capability to handle. As a result, significant levels of solids were washed out when the sole secondary clarifier was overloaded by high inflows, resulting in violations of CBOD, TSS and SM limits. However, Board staff found that not all violations of these conventional pollutant limits were caused by high inflows as a result of extreme rainfalls. In 1999, eleven violations of these conventional pollutant limits that occurred in February were in fact caused by the unavailability of the sole primary clarifier due to an emergency repair of the equipment. The absence of a functional primary clarifier also resulted in the Discharger bypassing the wastewater from secondary treatment. Additionally, the five effluent limit violations occurred in October 1999 were caused by the unavailability of the sole secondary clarifier due to incomplete routine maintenance work. As such, these sixteen effluent limit violations and the associated bypass indicated that the Discharger failed to provide adequate treatment redundancy to ensure performance reliability. Had the Treatment Plant been able to provide backup treatment units, the extent and magnitude of most of these effluent limit violations might have been reduced or avoided.

[1] The total volume was based on two reported bypass volumes (420,000 gallons on 2/3/1998 and 125,000 gallons on 2/21/1998) and one estimated for the third bypass, which occurred on 2/9/1999. The estimate volume was 835,000 gallons, based on the reported 12 hours of bypass and an average daily effluent flow of 1.668 million gallons.

Since the violations of the discharge prohibitions occurred in the months in which the Treatment Plant also violated the monthly average CBOD limit (see Attachment A and footnote 2 below), those days of violations of the discharge prohibitions were not separately assessed to avoid double penalty.

Table 1. Summary of Discharger's Permit Violations and Non-Compliance

Type of Violations	Specific of Permit Violations	Counts	Total Counts	Days	Total Days
A. Discharge Prohibition	Near shore discharge with no initial dilution	2		--[2]	
	Bypass secondary treatment	3		--[2]	
B. Effluent Limitation	Monthly average CBOD limit	10		307	
	Weekly average CBOD limit	6		7[2]	
	Daily maximum CBOD limit	11		--[2]	
	Monthly average TSS limit	1		31	
	Weekly average TSS limit	1		--[2]	
	Daily maximum TSS limit	4		--[2]	
	Monthly average SM limit	4		87[2]	
	Instantaneous maximum SM limit	12		--[2]	
	5-sample median total coliform limit	10		7[2]	
	Daily average cyanide limit	9		3[2]	
C. Self-Monitoring Program	Failure to submit complete monitoring report	1	*74*	1	*443*

C. Degree of Toxicity of the Discharge

The discharge of over 370 million gallons of partially treated wastewater from the Treatment Plant might have impacted the water quality and beneficial uses of the receiving water. The 1995 Water Quality Control Plan for the San Francisco Bay Basin establishes water quality objectives for the protection of beneficial uses of San Francisco Bay. The beneficial uses include:

- Water contact and non-contact recreation
- Navigation
- Commercial and sport fishing
- Wildlife habitat
- Estuarine habitat
- Preservation of rare and endangered species
- Fish spawning and migration
- Industrial service supply
- Shellfish harvesting

The NPDES permit prescribes appropriate discharge prohibitions and effluent limitations to regulate the discharge from the Treatment Plant such that the above beneficial uses will be protected. The water quality and public health effects of effluent limit violations are of concern because of the potential impacts to beneficial uses, especially contact and non-contact water recreational uses. The potential

[2] These days were included in the corresponding monthly limit violation days.

water quality impacts from violations of TSS and SM solids effluent limits include deposition of material that can cause nuisance to or adversely affect the benthic community, sediments, and biota.

CBOD is a measurement of the dissolved oxygen consumed by microorganisms in biochemical oxidation of organic matters. Fish and other aquatic animal species require oxygen, and a waterbody must have a minimum of about 2 mg/L of dissolved oxygen to maintain higher life forms. At least 4 mg/L of dissolved oxygen is required for game fish, and some species may require more. The potential water quality impacts from violations of CBOD effluent limits include the depletion of dissolved oxygen, which may lead to short-term stress to certain aquatic life, at the point of discharge in the receiving water. However, any adverse effect caused by the Discharger's CBOD violations may be transient due to the large natural dilution in the receiving water.

Coliform bacteria are used as indicator species for pathogens (disease-causing organisms) in the effluent. Pathogens are harmful to humans as well as to fish and wildlife. Some of the beneficial uses that may have been adversely impacted include water contact recreation and non-contact water recreation.

Any toxic effects on aquatic life due to exceedances of the cyanide limit is expected to be low, as this pollutant does not persist in receiving water and the levels of exceedances in the abovementioned violations are low.

D. Discharge Susceptible to Cleanup and Abatement

The discharges described in the Complaint were not susceptible to cleanup and abatement. Once the wastewater was discharged into the lower San Francisco Bay, the Discharger was not able to contain and clean up the discharges in these violations.

E. Voluntary Cleanup Efforts Undertaken

The Discharger had not reported any voluntary cleanup in abatement of the effects of these violations on the environment. As discussed above, these discharges were not susceptible to cleanup and abatement. Thus, it was understandable that the Discharger did not initiate any voluntary cleanup efforts.

F. Degree of Culpability

The Discharger is responsible at all times for the proper operation and maintenance of the Treatment Plant to ensure that the discharge of effluent complies with its NPDES permit requirements. Since 1995, the Regional Board has recognized that the Treatment Plant does not have adequate backup capacities for the primary and secondary clarifiers. To memorialize the Discharger's anticipated schedules and planned actions for plant improvement, Order No. 95-054 included a provision that required the Discharger to document its completion of the design and construction of a primary clarifier and a secondary clarifier. The Discharger stopped the design after completing 95% in November 1996, and began to consider alternate designs. In its December 27, 2001 and June 7, 2002 letters to Board staff, the Discharger clarified that the decision to discontinue the design of the clarifiers was based on its evaluation that it was not cost-effective to continue the work.

Since November 1996, the Discharger has altered its plant improvement designs several times in consideration of the low cost-benefit due to escalating construction costs. The Discharger's decision on a final design was further delayed due to the possibility of demolishing the whole plant if the new runways were built through the plant area. A final design, which is to build three sequential batch reactors and other new treatment facilities at the existing plant location for bio-treatment and settling of the wastewater, was chosen in 2001. Although the construction for the new treatment facilities is presently underway pursuant to the compliance schedules established by the Regional Board in the CDO,

the Discharger's indetermination on the final design since 1996 has caused the Treatment Plant to continue operation without adequate redundancy.

Although some of the permit violations were due to extreme rainfall events, the Discharger is culpable for the violations described in the Complaint, as the Discharger failed to provide adequate backup clarifier capacities for the Treatment Plant to fulfill the permit requirement of maintaining reliable treatment performance. Additionally, its frequent changes in plant improvement efforts were mostly based on cost concerns only.

G. History of Violations and Enforcement

As shown in Attachment A, the Discharger had a pattern of violations of CBOD, SM, and total coliform limits in 1995 through 1997. In 1998, the Discharger's violations mainly consisted of SM and TSS. In 1999, most of the violations were related to CBOD and SM. These violations indicated that the Discharger had difficulty to comply with the effluent limitations of these conventional pollutants due to the lack of adequate clarifier capacities.

On July 25, 2001, Board staff verbally notified the Discharger of its non-compliance with the NPDES permit. On November 9, 2001, the Executive Officer issued a Notice of Violation to the Discharger indicating possible enforcement actions against its effluent limit violations.

On November 28, 2001, the Regional Board adopted the CDO requiring the Discharger to cease and desist discharging partially treated wastewater to the water of the state. The CDO also includes tasks and time schedules for the Discharger to correct the effluent limit violations. Since then, the Discharger has been in compliance with the CDO.

H. Other Factors Justice May Require

The Discharger attributed some of its effluent limit violations to inefficient operational management of the airport's sewage pump stations and the presence of cross-connections allowed stormwater to overflow from the drainage pump stations to sewage pump stations. According to the Discharger, a supervisory control and data acquisition (SCADA) system will be installed in the future to improve the operational management of its sewage pump stations throughout the airport. In an effort to reduce the volume of stormwater inflow to the Treatment Plant, the Discharger initiated an infiltration study in 1998. The study results identified cross-connections that led to excessive amount of stormwater inflow to the Treatment Plant in some stormy events. Upon eliminating some of these identified cross-connections since then, the Discharger claimed that it has significantly reduced stormwater overflows to the sewage pump stations.

In assessing the Discharger's liability, Board staff has considered the above and determined that no credit should be given in adjusting the ACL amount, as these activities should have been carried out by the Discharger as part of its efforts to optimize the operation of the Treatment Plant and sewage collection system.

V. DETERMINATION OF ACL AMOUNT

Table VII-I of the Enforcement Policy summarizes the procedure to set ACL amounts. The procedure consisted of nine steps, namely, initial liability, beneficial use liability, base amount, adjustment for discharger's conduct, adjustment for other factors, economic benefit, staff costs, adjustment for ability to

pay, and check against statutory limits. The ACL determination for the Discharger's violations of its NPDES permit requirements followed the Enforcement Policy, and is discussed as follows.

A. Initial Liability

The Discharger committed both types of discharge and non-discharge violations. Considering the Discharger's cooperation in this matter, the total initial water quality liabilities were determined to be $205,225.00 as below:

1. Liability Related to Discharge Violations

Considering that (i) any adverse effects including threats to water quality, aquatic life, and human health posed by the discharge of CBOD, TSS, SM, total coliform, and cyanide into the receiving water were short-term only due to the large dilution (with the exception of the near-shore discharges) available in the lower San Francisco Bay; (ii) most of the weekly and monthly limit violations were caused by the exceedances of the corresponding daily maximum limits; and (iii) no toxic and bioaccumulative pollutants were involved in the above violations, the initial water quality liability related to the abovementioned effluent limit violations is $121,550.00.

Considering that (i) the bypasses of secondary treatment and near-shore discharges were in violation of discharge prohibitions of the NPDES permit, (ii) these violations were due to the Discharger's failure to provide adequate backup systems, and (iii) these discharges had higher pollutant levels that might have adversely impacted the receiving water than the properly treated effluent that was subject to substantial initial dilution, the associated initial water quality liability was assessed for the total volume of these unauthorized discharges. The initial water quality liability related to the bypasses and near-shore discharges is $83,400.00.

2. Liability Related to Non-Discharge Violations

Considering that (i) the Discharger failed to comply with the Self-Monitoring Program requirement on one day only, (ii) the missing of a daily BOD result had minimal effect on Board staff's ability to determine the Discharger's compliance with the permit, and (iii) any adverse effects associated with the discharge of BOD at a level above the corresponding limit might have been short-term only, the initial liability related to this non-discharge violation is $275.

B. Beneficial Use Liability

No information related to any quantifiable impacts to beneficial uses of the lower San Francisco Bay was available. Therefore, the beneficial use liability is set to $0.

C. Base Amount

The Enforcement Policy describes that the base amount is the initial liability, the beneficial use liability or a combination of the initial liability and the beneficial use liability. The Enforcement Policy further states that "the Regional Board may, at [its] discretion, find it appropriate to combine the amounts from Steps A and B [above] in a way that reflects the significance of the impacts quantified in Step B relative to the total impacts of the violations". Considering any adverse impacts to beneficial uses of the receiving water caused by the above permit violations would have been short-term and limited extent, Board staff believes the combined initial and beneficial use liabilities of $205,225.00 is appropriate to reflect the significance of the violations.

D. Conduct of the Discharger

The Enforcement Policy enlists four conduct factors to allow the Regional Board to adjust the base liability amount, as determined in Step C above. These factors are: culpability factor (CF1), notification

factor (CF2), cleanup and cooperation factor (CF3), and history of violations factor (CF4). These factors have mixed effects on the liability adjustment and Board staff has already considered these factors in determining the aforementioned initial liability.

E. Adjustment for Other Factors

The Enforcement Policy states that "[i]f the Regional Board believes that the amount determined using Steps A through D is inappropriate, the amount may be adjusted". As discussed in section IV.H above, no credit adjustment was allowed for the Discharger's claimed activities.

F. Economic Benefit

The Regional Board is authorized, although not required, to recover any economic benefit a discharger derived from the acts that constituted violations that occurred before January 1, 2000. Considering the major act that resulted in these violations was the Discharger's failure to provide adequate redundancy for the Treatment Plant, Board staff used the cost information provided by the Discharger and the BEN model developed by the U.S. Environmental Protection Agency to estimate the economic benefit. The model calculation estimated an economic benefit of $1.5 million.

However, the Discharger is presently constructing new treatment facilities to improve the plant performance. These plant improvement efforts cost a total of $40 million, based on the 2001 price. This plant improvement cost is substantially higher than the $4.9 million construction cost for the two clarifiers or the $12 million total cost (estimated in 1996) for the original overall plant improvement including the two clarifiers. Although the scope of construction for the 2001 plant improvement is different from that designed in 1996, the estimated economic benefit is offset by the elevated $40 million construction cost. Therefore there is no net economic benefit to the Discharger.

G. Staff Costs

Regional Board spent a total of 220 hours staff time to prepare the Complaint and the supporting evidence. At an average cost to the State of $100 per hour, the total staff cost for this enforcement action was $22,000.00, and added to the ACL amount. The adjusted ACL amount became $227,225.00.

H. Ability to Pay and Continue in Business

The Treatment Plant's budget was derived from the Discharger's operating fund allocated to the airport's Utility Engineering Division – Facilities, Operations and Maintenance. The Discharger provided fiscal information for the year 2002-2003 in response to Board staff's previous requests. The proposed monetary penalty is a small percentage of the Discharger's overall budget for the Utility Engineering Division. Thus, the Discharger is able to pay the proposed penalty without significant impacts on its ability to fulfill the airport responsibilities.

I. Statutory Maximum Penalty

The statutory maximum amount of ACL for each day of violation is ten thousand dollars ($10,000) plus ten dollars ($10) times the number of gallons discharged but not cleaned up and in excess of 1,000 gallons. The proposed ACL amount does not exceed the statutory maximum penalty.

VI. **RECOMMENDATION**

In consideration of the facts in this case and prior Board actions, Board staff recommends a liability of $227,225.00 to be imposed against the Discharger for its Water Quality Control Plant's violations of Order No. 95-054 for a total of 443 days and the discharge of over 370 million gallons of partially treated

wastewater to the lower San Francisco Bay during the period between April 1, 1995 and December 31, 1999. The proposed civil liability amount includes penalties for violations of effluent limitations, discharge prohibitions, and Self-Monitoring Program of Order No. 95-054, and the recovery of staff cost in preparation of the Complaint.

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Attachment A
NPDES Permit Violations Covered by this Complaint

Item No.	Date	Specific of Violation	Percent of Limit Exceedance	Discharge volume (gallons)	Day of Violat-ion	Violati-on Count	Violation of Effluent Limitation
1	12/31/1999	Monthly average total suspended solids (32) > limit (30 mg/L)	7	27,890,000	31	1	B.1
2	12/6/1999	Daily average cyanide (11.9) > limit (10 ug/L))	19			1	B.6
3	10/31/1999	Monthly average CBOD (65) > limit (25 mg/L)	160	27,110,000	31	1	B.1
4	10/21/1999	Weekly average CBOD (80) > limit (40 mg/L)	100			1	B.1
5	10/17/1999	Daily maximum CBOD (90) > limit (50 ug/L))	80			1	B.1
6	10/16/1999	Daily maximum CBOD (146) > limit (50 ug/L))	192			1	B.1
7	10/15/1999	Daily maximum CBOD (177) > limit (50 ug/L))	254			1	B.1
8	10/14/1999	Weekly average CBOD (123) > limit (40 mg/L)	208			1	B.1
9	10/14/1999	Daily maximum CBOD (132) > limit (50 ug/L))	164			1	B.1
10	10/13/1999	Daily maximum CBOD (143) > limit (50 ug/L))	186			1	B.1
11	10/12/1999	Daily maximum CBOD (125) > limit (50 ug/L))	150			1	B.1
12	10/12/1999	Instant. Maximum settleable matter (0.6) > limit (0.2 mL/L-hr)	200			1	B.1
13	10/11/1999	Daily maximum CBOD (92) > limit (50 ug/L))	84			1	B.1
14	2/28/1999	Monthly average settleable matter (0.59) > limit (0.1 mL/L-hr)	490	22,950,000	28	1	B.1
15	2/9/1999	Bypass secondary treatment: (est) 835,000 gallons of primary decant				1	A.2
16	2/9/1999	Daily maximum CBOD (55) > limit (50 mg/L)	10			1	B.1
17	2/9/1999	Daily maximum total suspended solids (100) > limit (6 mg/L)	67			1	B.1
18	2/9/1999	Instant. maximum settleable matter (16.4) > limit (0.2 mL/L-hr)	8100			1	B.1
19	6/18/1998	5-sample median coliform (300) > limit (240)	25	1,030,000	1	1	B.5
20	6/17/1998	5-sample median coliform (300) > limit (240)	25	990,000	1	1	B.5
21	2/28/1998	Monthly average settleable matter (2.8) > limit (0.1 mL/L-hr)	2700	33,970,000	28	1	B.1
22	2/21/1998	Bypass secondary treatment:125,000 gallons of primary decant				1	A.2
23	2/7/1998	Weekly average total suspended solids (59) > limit (45 mg/L)	31			1	B.1
24	2/6/1998	Instant. maximum settleable matter (18.8) > limit (0.2 mL/L-hr)	9300			1	B.1
25	2/3/1998	Daily maximum total suspended solids (132) > limit (60 mg/L)	120			1	B.1
26	2/3/1998	Bypass secondary treatment: 420,000 gallons of primary decant				1	A.2
27	2/3/1998	Near-shore discharge: 225,000 gallons of effluent				1	A.1
28	2/3/1998	Instant. maximum settleable matter (11) > limit (0.2 mL/L-hr)	5400			1	B.1
29	2/2/1998	Daily maximum total suspended solids (79) > limit (60 mg/L)	32			1	B.1
30	2/2/1998	Instant. maximum settleable matter (49.5) > limit (0.2 mL/L-hr)	24650			1	B.1
31	1/31/1998	Monthly average settleable matter (1.8) > limit (0.1 mL/L-hr)	1700	29,730,000	31	1	B.1
32	1/29/1998	Instant. maximum settleable matter (5.8) > limit (0.2 mL/L-hr)	2800			1	B.1
33	1/19/1998	Daily average cyanide (10.6) > limit (10 ug/L))	6			1	B.6
34	1/12/1998	Daily maximum total suspended solids (116) > limit (60 mg/L)	93			1	B.1
35	1/12/1998	Near-shore discharge: 63,000 gallons of effluent				1	A.1
36	1/12/1998	Instant. maximum settleable matter (32.7) > limit (0.2 mL/L-hr)	16250			1	B.1
37	1/4/1998	Instant. maximum settleable matter (9.2) > limit (0.2 mL/L-hr)	4500			1	B.1
38	1/2/1998	Instant. maximum settleable matter (6.5) > limit (0.2 mL/L-hr)	3150			1	B.1
39	11/14/1997	5-sample median coliform (350) > limit (240)	46	2,090,000	1	1	B.5
40	11/13/1997	5-sample median coliform (350) > limit (240)	46	850,000	1	1	B.5
41	11/12/1997	5-sample median coliform (350) > limit (240)	46	1,020,000	1	1	B.5
42	9/30/1997	No CBOD sample was taken			1	1	SMP
43	1/31/1997	Monthly average CBOD (32) > limit (25 mg/L)	28	25,170,000	31	1	B.1
44	1/31/1997	Monthly average settleable matter (0.82) > limit (0.1 mL/L-hr)	720			1	B.1
45	1/25/1997	Instant. maximum settleable matter (0.4) > limit (0.2 mL/L-hr)	100			1	B.1
46	1/22/1997	Instant. maximum settleable matter (25) > limit (0.2 mL/L-hr)	12400			1	B.1

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Attachment A
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Item No.	Date	Specific of Violation	Percent of Limit Exceedance	Discharge volume (gallons)	Day of Violat-ion	Violati-on Count	Violation of Effluent Limitation
47	1/18/1997	Instant. maximum settleable matter (2.9) > limit (0.2 mL/L-hr)	1350			1	B.1
48	1/7/1997	Weekly average CBOD (45) > limit (40 mg/L)	13			1	B.1
49	1/6/1997	Daily maximum CBOD (60) > limit (50 ug/L))	20			1	B.1
50	1/2/1997	5-sample median coliform (350) > limit (240)	46			1	B.5
51	12/31/1996	Monthly average CBOD (32.9) > limit (25 mg/L)	32	26,940,000	31	1	B.1
52	12/31/1996	5-sample median coliform (350) > limit (240)	46			1	B.5
53	12/30/1996	5-sample median coliform (350) > limit (240)	46			1	B.5
54	12/19/1996	Daily average cyanide (10.6) > limit (10 ug/L))	6			1	B.6
55	12/14/1996	Weekly average CBOD (50) > limit (40 mg/L)	25			1	B.1
56	12/10/1996	Daily maximum CBOD (65) > limit (50 ug/L))	30			1	B.1
57	12/9/1996	Daily maximum CBOD (54) > limit (50 ug/L))	8			1	B.1
58	11/25/1996	5-sample median coliform (460) > limit (240)	92	780,000	1	1	B.5
59	11/22/1996	5-sample median coliform (460) > limit (240)	92	1,220,000	1	1	B.5
60	9/30/1996	Monthly average CBOD (26.2) > limit (25 mg/L)	5	20,680,000	30	1	B.1
61	7/31/1996	Monthly average CBOD (25.1) > limit (25 mg/L)	0.4	22,650,000	31	1	B.1
62	7/22/1996	Daily average cyanide (11.9) > limit (10 ug/L))	19			1	B.6
63	6/30/1996	Monthly average CBOD (37) > limit (25 mg/L)	48	24,170,000	30	1	B.1
64	6/14/1996	Weekly average CBOD (41) > limit (40 mg/L)	3			1	B.1
65	6/10/1996	Daily average cyanide (29.1) > limit (10 ug/L))	191			1	B.6
66	5/31/1996	Monthly average CBOD (27) > limit (25 mg/L)	8	25,600,000	31	1	B.1
67	5/6/1996	Daily average cyanide (17) > limit (10 ug/L))	70			1	B.6
68	4/30/1996	Monthly average CBOD (27) > limit (25 mg/L)	8	22,690,000	30	1	B.1
69	3/31/1996	Monthly average CBOD (25.6) > limit (25 mg/L)	2	23,260,000	31	1	B.1
70	1/31/1996	Monthly average CBOD (31) > limit (25 mg/L)	24	27,300,000	31	1	B.1
71	12/21/1995	Weekly average CBOD (42.3) > limit (40 mg/L)	6		7	1	B.1
72	10/19/1995	Daily average cyanide (10.6) > limit (10 ug/L))	6	840,000	1	1	B.6
73	10/2/1995	Daily average cyanide (15.4) > limit (10 ug/L))	54	690,000	1	1	B.6
74	9/11/1995	Daily average cyanide (13) > limit (10 ug/L))	30	750,000	1	1	B.6
		Total:		370,370,000	443	74	

Note:

1. A.1 and A.2 means Discharge Prohibitions A.1 (Require dilution) and A.2 (No Bypass) of Board Order No. 95-054
2. SMP means Self-Monitoring Program requiements.
3. The blank violation days and volumes were included in the corresponding monthly values.